

**WHAT IS CLAIMED IS:**

1. A color wheel index aligning apparatus for a display apparatus having a color wheel as a color separator, comprising:

a signal supply unit which supplies a predetermined image signal to the display apparatus, the predetermined image signal being processed at the display apparatus and output to a screen;

a color detection unit which detects the color of an image signal output to the screen;

a storage unit which stores color coordinates with respect to red, green and blue colors; and

a control unit which measures a color coordinate value of the color detected at the color detection unit based on the color coordinates stored in the storage unit, and using the measured color coordinate value, providing the display apparatus with an alignment value for aligning a color wheel index.

2. A color wheel index aligning apparatus for a display apparatus having a color wheel as a color separator, comprising:

means for supplying a predetermined image signal to the display apparatus, the predetermined image signal being processed at the display apparatus and output to a screen;

means for detecting the color of an image signal output to the screen;

means for storing color coordinates with respect to red, green and blue colors; and

means for measuring a color coordinate value of the color detected at the color detection means based on the color coordinates stored in the storage means, and using the measured color coordinate value, providing the display apparatus with an alignment value for aligning a color wheel index.

3. The color wheel index aligning apparatus of claim 1, wherein the signal supply unit supplies at least one of the image signal of red, green and blue colors, and

the control unit adjusts the alignment value based on the color coordinate value of one of the image signals of red, green and blue colors being supplied from the signal supply unit.

4. The color wheel index aligning apparatus of claim 1, wherein the control unit compares a first color coordinate value with respect to the color of the image signal currently output to the screen and a second color coordinate value with respect to the color of the image signal previously output to the screen, and when the first color coordinate value is equal to, or greater than the second color coordinate value, the control unit increases and decreases the alignment value and provides the display apparatus with the alignment value.

5. The color wheel index aligning apparatus of claim 4, wherein the display apparatus comprises:

an image signal processor for processing the supplied predetermined image signal into R, G and B color signals and outputting the processed R, G and B color signals; and

a system control unit for controlling an output timing of the R, G and B color signals from the image signal processor, wherein

the system control unit controls the image signal processor to increase and decrease the delay time of the output timing for the R, G and B color signals in correspondence with the increased and decreased alignment value provided from the control unit.

6. An alignment method of a color wheel index aligning apparatus which is for a display apparatus having a color wheel as a color separator, comprising:

a signal supply step for supplying a predetermined image signal to the display apparatus;

display step for processing the predetermined image signal and outputting the processed signal to a screen of the display apparatus;

color detection step for detecting the color of the image signal output to the screen of the display apparatus;

adjusting step for measuring the color coordinate value of the color detected in the color detection step based on the pre-stored color coordinates, and using the measured color coordinate value, aligning and adjusting an alignment value for aligning a color wheel index; and

a providing step for providing the display apparatus with the alignment value adjusted in the adjusting step.

7. An alignment method of a color wheel index aligning apparatus which is for a display apparatus having a color wheel as a color separator, comprising:

supplying a predetermined image signal to the display apparatus;

processing the predetermined image signal and outputting the processed signal to a screen of the display apparatus;

detecting the color of the image signal output to the screen of the display apparatus;

measuring the color coordinate value of the color detected in the color detection step based on the pre-stored color coordinates, and using the measured color coordinate value, aligning and adjusting an alignment value for aligning a color wheel index; and

providing the display apparatus with the alignment value adjusted in the adjusting step.

8. The alignment method of claim 6, wherein the signal supply step supplies at least one of the image signal of red, green and blue colors, and the adjusting step adjusts the alignment value based on the color coordinate value of one of the image signal of red, green and blue colors being supplied in the signal supply step.

9. The alignment method of claim 6, wherein the adjusting step comprises:

a comparing step of comparing a first color coordinate value with respect to the color of the image signal currently output to the screen and a second color coordinate value with respect to the color of the image signal previously output to the screen; and

increasing/decreasing step of, when the first color coordinate value is equal to, or greater than the second color coordinate value, increasing and decreasing the alignment value.

10. The alignment method of claim 9, wherein the display step comprises an output step of processing the supplied predetermined image

signal into R, G and B color signals, and outputting the processed R, G and B color signals, and

the output step increases and decreases the delay time of the output timing for the R, G and B color signals in correspondence with the increase and decrease of the alignment value.